Geophysical Research Abstracts, Vol. 8, 02947, 2006
SRef-ID: 1607-7962/gra/EGU06-A-02947

Variability of the Malvinas current transport

A. Spadone, N. Barré, F. Stoehr and C. Provost

Laboratoire d'Océanographie et du Climat : Expérimentations et Approches Numériques, France

A first set of currentmeter measurements was collected between 40˚S and 41˚S in the Malvinas Current during WOCE (Vivier and Provost, 1999a). Owing to the premature failure of a mooring, a reliable volume transport time series could only be calculated for 254 days, leading to a mean transport of about 41.5 Sv with a standard deviation of 12.2 Sv. The barotropic (depth independent) component of the flow accounted, on average, for about half of the total transport but with peak values up to 70%. It was shown that the TOPEX/Poséïdon altimeter could be used to sensitively monitor the flow when combined with the statistical information on the vertical structure of the current provided by the current meters (Vivier and Provost, 1999b). A 5-year-long time series of transport was derived and made it possible to study intraseasonal variability. Dominant periods were 50-80 days and close to 180 days. Comparatively little energy was found at the annual period. Interannual variations could not be examined since the mean field was estimated with a short in situ time series.

We present here a new set of currentmeter measurements obtained at the same location during CLIVAR. We compare the two in situ data sets which are 9 years apart. A 13-year-long transport time series is constructed using TOPEX/Poséïdon and Jason altimeter data and the information brought by the two currentmeter data sets. Preliminary analyses of this long time series are presented.